

#### ABSTRACT OF THE DISCLOSURE

The invention relates to a regulating heat exchange and cooling method and system for monitoring and controlling the temperatures of walls subjected to high temperatures. The inventive system is used to cool the inner wall (7) of a thermal system comprising a double wall (9), said inner wall being subjected to temperatures equal to or greater than the physical capacity thereof. Said system also comprises a network of tubes (1) which is independent of the thermal system to be cooled. The aforementioned tubes (1) contain pressurised cooling water (4) which circulates therethrough. Moreover, said tubes are provided with nozzles (3) which are used to spray and project the water in the form of solid cones (5) against the inner wall (7), said nozzles being controlled by adjustable-flow valves (2). The above-mentioned network of tubes forms an integral part of the outer wall of the thermal system to be cooled and the system also comprises means of maintaining the water projection area defined by the inner and outer walls in a vacuum condition.

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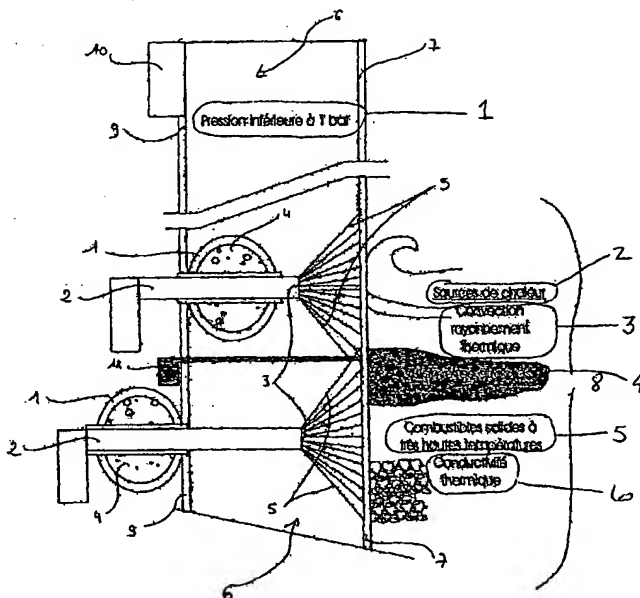
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(54) Title: REGULATING HEAT EXCHANGE AND COOLING METHOD AND SYSTEM FOR MONITORING AND CONTROLLING THE TEMPERATURES OF WALLS SUBJECTED TO HIGH TEMPERATURES

(54) Titre : SYSTÈME ET PROCÉDÉ DE REFROIDISSEMENT ET D'ÉCHANGE THERMIQUE RÉGULATEUR, POUR LE CONTRÔLE ET LA MAÎTRISE DES TEMPÉRATURES DE PAROIS SOUMISES À HAUTES TEMPÉRATURES



1. PRESSURE LESS THAN 1 BAR
2. HEAT SOURCES
3. THERMAL RADIATION CONVECTION
4. DIRECT FLAMES
5. SOLID FUEL AT VERY HIGH TEMPERATURES
6. THERMAL CONDUCTIVITY

(57) Abstract: The invention relates to a regulating heat exchange and cooling method and system for monitoring and controlling the temperatures of walls subjected to high temperatures. The inventive system is used to cool the inner wall (7) of a thermal system comprising a double wall (9), said inner wall being subjected to temperatures equal to or greater than the physical capacity thereof. Said system also comprises a network of tubes (1) which is independent of the thermal system to be cooled. The aforementioned tubes (1) contain pressurised cooling water (4) which circulates therethrough. Moreover, said tubes are provided with nozzles (3) which are used to spray and project the water in the form of solid cones (5) against the inner wall (7), said nozzles being controlled by adjustable-flow valves (2). The above-mentioned network of tubes forms an integral part of the outer wall of the thermal system to be cooled and the system also comprises means of maintaining the water projection area defined by the inner and outer walls in a vacuum condition.

(57) Abrégé : « Système et procédé de refroidissement et d'échange thermique régulateur, pour le contrôle et la maîtrise des températures de parois soumises à hautes températures » Système pour refroidir une paroi interne (7) d'un système thermique comportant une double paroi (9), ladite paroi interne étant soumise à des températures égales ou supérieures à sa

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